CLAIMS

1. A method for operating a memory controller, the method comprising:

receiving a current memory access request from an agent;

determining a page management policy associated with the agent in response to the receiving;

setting the memory controller to the page management policy associated with the agent;

executing the current memory access request on the memory controller; and

transmitting results of the executing to the agent.

2. The method of claim 1 wherein the page management policy is a page-open policy.

3. The method of claim 1 wherein the page management policy is a page-close policy.

4. The method of claim 1 wherein the current memory access request includes an agent type and the determining is responsive to the agent type.

5. The method of claim 4 wherein the agent type is a central processing unit or an input output adapter.

6. The method of claim 1 wherein the current memory access request includes an agent workload type and the determining is responsive to the agent workload type

7. The method of claim 1 wherein the current memory access request includes a unique identifier for the agent and the determining is responsive to the unique identifier.

8. The method of claim 1 wherein the determining a page management policy includes:

calculating a probability that a future memory access request by the agent will include access to a page accessed by the current memory access request; and

using the probability to determine the page management policy.

9. The method of claim 8 wherein the calculating is based on a history of memory access patterns associated with the agent.

10. The method of claim 8 wherein the probability is calculated based on a number of prior sequential memory access requests by the agent to a common page divided by a total number of prior memory access requests by the agent in a specified time interval.

11. The method of claim 8 wherein the probability is calculated based on a number of prior sequential memory access requests by the agent to a common page.

12. The method of claim 8 wherein the determining results in a page management policy of page-open if the probability is greater than or equal to a threshold value and a page management policy of page-close if the probability is less than the threshold value.

13. The method of claim 1 wherein the determining results in the page management policy being dynamically adapted based one or more prior memory accesses by the agent.

14. The method of claim 1 wherein the setting the memory controller is performed dynamically in response to the determining.

15. A system for accessing system memory, the system comprising:

a memory bank configured to support page accesses; and

a memory controller in communication with the memory bank and an agent, wherein the memory controller includes instructions to implement a method including:

receiving a current memory access request from the agent, wherein the current memory access request includes a request to access data stored on the memory bank;

determining a page management policy associated with the agent in response to the receiving;

setting the memory controller to the page management policy associated with the agent;

executing the current memory access request on the memory controller, wherein the executing includes accessing a page on the memory bank; and

transmitting results of the executing to the agent.

16. The system of claim 15 wherein the memory bank includes one or more memory devices.

17. The system of claim 15 wherein the memory devices include one or more of dynamic random access memory, extended data out dynamic random access memory and synchronous dynamic random access memory.

18. The system of claim 15 wherein the memory bank includes main memory.

19. A computer program product for operating a memory controller, the computer program product comprising:

a storage medium readable by a processing circuit and storing instructions for execution by the processing circuit for performing a method comprising:

receiving a current memory access request from an agent;

determining a page management policy associated with the agent in response to the receiving;

setting the memory controller to the page management policy associated with the agent;

executing the current memory access request on the memory controller; and

transmitting results of the executing to the agent.

20. The computer program product of claim 18 wherein the determining a page management policy includes:

calculating a probability that a future memory access request by the agent will include access to a page accessed by the current memory access request, wherein the calculating is based on a history of memory access patterns associated with the agent; and

using the probability to determine the page management policy.